

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport et al.

Serial No.: Not Assigned

Group Art Unit: Not Assigned

(Divisional of 10/606,115 filed 06/26/03, which is a  
Continuation of 09/633,121 filed 08/04/00 , now  
U.S. Patent 6,625,454)

Filed: Concurrently

Examiner: Not Assigned

For: METHOD AND SYSTEM, WITH COMPONENT KITS, FOR DESIGNING OR  
DEPLOYING A COMMUNICATIONS NETWORK WHICH CONSIDERS  
FREQUENCY DEPENDENT EFFECTS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Under the provisions of 37 C.F.R. 1.97 through 1.99 and pursuant to applicant's duty of disclosure under 37 C.F.R. 1.56, applicant respectfully brings the following documents, listed on the attached form PTO-1449, to the attention of the Examiner in charge of the above-identified application. Under the provisions of 37 C.F.R. 1.98(d) copies of the references are not required. Copies of the references can be found in the parent case (U.S. Patent Application Serial Number 09/469,102 filed 12/21/99).

This citation does not constitute an admission that the references are relevant or material to the claims. They are only cited as constituting related art of which the applicant is aware.

This statement shall not be construed as a representation that a search has been made or that no other art than that identified exists.

It is respectfully requested that the listed references be considered by the Examiner and formally made of record in this application.

Respectfully submitted,



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Reg. No. 33,138

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**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

Docket Number (Optional)

02560032CA

Application Number

not assigned

Applicant(s)

Rappaport et al.

Filing Date

concurrently

Group Art Unit

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**U.S. PATENT DOCUMENTS**

| *  |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name             | Classification |
|----|---|--|-----------------|------------------|----------------|
| AS | A | US-6317599                                       | 11-2001         | Rappaport et al. | 455/446        |
| AS | B | US-6493679                                       | 12-2002         | Rappaport et al. | 705/29         |
| AS | C | US-6496290                                       | 12-2002         | Lee              | 359/136        |
|    | D | US-  |                 |                  |                |
|    | E | US-  |                 |                  |                |
|    | F | US-  |                 |                  |                |
|    | G | US-  |                 |                  |                |
|    | H | US-  |                 |                  |                |
|    | I | US-  |                 |                  |                |
|    | J | US-  |                 |                  |                |
|    | K | US-  |                 |                  |                |
|    | L | US-  |                 |                  |                |
|    | M | US-  |                 |                  |                |

**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
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**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
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|   | X | /Akash Saxena/ (01/31/2007)   |

A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a)(1))

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. /Akash Saxena/ (01/31/2007)

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**U.S. PATENT DOCUMENTS**

| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE     | NAME             | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|------------------|-----|-----------------|----------|------------------|-------|----------|----------------------------|
| AS               | 1   | 4,675,147       | 6-23-87  | Schaefer et al.  |       |          | 4-6-83                     |
|                  | 2   | 4,736,453       | 4-5-88   | Schloemer        |       |          | 12-10-85                   |
|                  | 3   | 4,885,694       | 12-5-89  | Pray et al.      |       |          | 4-29-87                    |
|                  | 4   | 5,111,392       | 5-5-92   | Malin            |       |          | 6-9-89                     |
|                  | 5   | 5,119,307       | 6-2-92   | Blaha et al.     |       |          | 12-22-89                   |
|                  | 6   | 5,239,487       | 8-24-93  | Horejsi et al.   |       |          | 10-24-90                   |
|                  | 7   | 5,293,640       | 3-8-94   | Gunnar et al.    |       |          |                            |
|                  | 8   | 5,307,261       | 4-26-94  | Maki et al.      |       |          | 6-28-91                    |
|                  | 9   | 5,337,149       | 8-9-94   | Kozah et al.     |       |          | 11-12-92                   |
| ↓                | 10  | 5,339,184       | 8-16-94  | Tang             |       |          | 6-15-92                    |
| AS               | 11  | 5,375,123       | 12-20-94 | Andersson et al. |       |          | 2-5-93                     |

**FOREIGN PATENT DOCUMENTS**

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

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|   |                                       |   |
|---|---------------------------------------|---|
| Docket Number (Optional)<br><b>02560032CA</b> |                                       | Application Number<br><b>not assigned</b> |
| Applicant(s)<br><b>Rappaport et al.</b>       |                                       |   |
| Filing Date<br><b>concurrently</b>            | Group Art Unit<br><b>not assigned</b> |   |

**U.S. PATENT DOCUMENTS**

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|----------------------|-----|-----------------|----------|----------------------|-------|----------|-------------------------------|
| AS                   | 12  | 5,394,522       | 2-28-95  | Sanchez-Frank et al. |       |          | 9-13-93                       |
|                      | 13  | 5,450,615       | 9-12-95  | Fortune et al.       |       |          | 12-22-93                      |
|                      | 14  | 5,458,123       | 10-17-95 | Unger                |       |          | 4-29-94                       |
|                      | 15  | 5,465,390       | 11-7-95  | Cohen                |       |          | 2-12-93                       |
|                      | 16  | 5,482,050       | 1-9-96   | Smokoff et al.       |       |          | 2-17-94                       |
|                      | 17  | 5,485,568       | 1-16-96  | Venable et al.       |       |          | 10-8-93                       |
|                      | 18  | 5,491,644       | 2-13-96  | Pickering et al.     |       |          | 9-7-93                        |
|                      | 19  | 5,491,837       | 2-13-96  | Haartsen             |       |          | 3-7-94                        |
|                      | 20  | 5,493,679       | 2-20-96  | Virgil et al.        |       |          | 10-29-93                      |
| ↓                    | 21  | 5,515,269       | 5-7-96   | Willis et al.        |       |          | 11-8-93                       |
| AS                   | 22  | 5,528,518       | 6-18-96  | Bradshaw et al.      |       |          | 10-25-94                      |

**FOREIGN PATENT DOCUMENTS**

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

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|---------------------|-----|-----------------|----------|------------------|-------|----------|-------------------------------|
| AS                  | 23  | 5,539,665       | 7-23-96  | Lamming et al.   |       |          | 7-25-94                       |
|                     | 24  | 5,553,312       | 9-3-96   | Gatley et al.    |       |          | 6-20-94                       |
|                     | 25  | 5,553,620       | 9-10-96  | Snider et al.    |       |          | 5-2-95                        |
|                     | 26  | 5,555,354       | 9-10-96  | Strasnick et al. |       |          | 3-23-93                       |
|                     | 27  | 5,561,841       | 10-1-96  | Markus           |       |          |                               |
|                     | 28  | 5,564,070       | 10-8-96  | Want et al.      |       |          | 7-30-93                       |
|                     | 29  | 5,594,946       | 1-14-97  | Menich et al.    |       |          | 2-28-95                       |
|                     | 30  | 5,598,532       | 1-28-97  | Liron            |       |          | 10-21-93                      |
|                     | 31  | 5,625,827       | 4-29-97  | Krause et al.    |       |          | 12-23-94                      |
| ✓                   | 32  | 5,636,344       | 6-3-97   | Lewis            |       |          | 8-22-91                       |
| AS                  | 33  | 5,689,355       | 11-18-97 | Okubo et al.     |       |          | 7-1-96                        |

## FOREIGN PATENT DOCUMENTS

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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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|----------------------|-----|-----------------|----------|----------------|-------|----------|-------------------------------|
| AS                   | 34  | 5,761,093       | 6-2-98   | Urbish et al.  |       |          | 5-8-97                        |
|                      | 35  | 5,794,128       | 8-11-98  | Brockel et al. |       |          | 9-20-95                       |
|                      | 36  | 5,799,154       | 8-25-98  | Kuriyan        |       |          | 6-27-96                       |
|                      | 37  | 5,809,282       | 8-15-98  | Cooper et al   |       |          | 6-7-95                        |
|                      | 38  | 5,815,395       | 9-29-98  | Hart et al.    |       |          | 6-29-95                       |
|                      | 39  | 5,828,960       | 10-27-98 | Tang et al.    |       |          | 3-31-95                       |
|                      | 40  | 5,831,610       | 11-3-98  | Tonelli et al. |       |          | 2-23-96                       |
|                      | 41  | 5,832,389       | 11-3-98  | Dent           |       |          | 4-3-96                        |
|                      | 42  | 5,861,887       | 1-19-99  | Butler et al.  |       |          | 12-5-95                       |
| ✓                    | 43  | 5,867,112       | 2-2-99   | Kost           |       |          | 5-14-91                       |
| AS                   | 44  | 5,877,777       | 3-2-99   | Colwell        |       |          | 4-7-97                        |

**FOREIGN PATENT DOCUMENTS**

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|----------------------|-----|-----------------|---------|------------------|-------|----------|-------------------------------|
| AS                   | 45  | 5,878,328       | 3-2-99  | Chawla et al.    |       |          | 12-21-95                      |
|                      | 46  | 5,907,850       | 5-25-99 | Krause et al.    |       |          | 1-21-97                       |
|                      | 47  | 5,917,808       | 6-29-99 | Kosbab           |       |          | 1-17-97                       |
|                      | 48  | 5,923,850       | 7-13-99 | Barroux          |       |          | 6-28-96                       |
|                      | 49  | 5,926,762       | 7-20-99 | Arpec et al.     |       |          | 5-17-96                       |
|                      | 50  | 5,940,196       | 8-17-99 | Piehler et al.   |       |          | 5-16-97                       |
|                      | 51  | 5,945,976       | 8-31-99 | Iwamura et al.   |       |          | 12-10-96                      |
|                      | 52  | 5,948,055       | 9-7-99  | Pulsipher et al. |       |          | 8-29-96                       |
|                      | 53  | 5,949,335       | 9-7-99  | Maynard          |       |          | 4-14-98                       |
| ↓                    | 54  | 5,949,988       | 9-7-99  | Feisullin et al. |       |          | 4-3-97                        |
| AS                   | 55  | 5,953,669       | 9-14-99 | Stratis et al.   |       |          | 12-11-97                      |

**FOREIGN PATENT DOCUMENTS**

|  | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
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|---------------------|-----|-----------------|----------|-------------------|-------|----------|-------------------------------|
| AS                  | 56  | 5,963,867       | 10-5-99  | Reynolds et al.   |       |          | 8-16-95                       |
|                     | 57  | 5,970,406       | 10-19-99 | Komara            |       |          | 12-31-96                      |
|                     | 58  | 5,987,328       | 11-16-99 | Ephremides et al. |       |          | 4-24-97                       |
|                     | 59  | 6,006,021       | 12-21-99 | Tognazzini        |       |          | 7-1-96                        |
|                     | 60  | 6,018,625       | 1-25-00  | Hayball et al.    |       |          | 8-27-97                       |
|                     | 61  | 6,021,316       | 2-1-00   | Heiska et al.     |       |          |                               |
|                     | 62  | 6,032,105       | 2-29-00  | Lee et al.        |       |          | 7-31-97                       |
|                     | 63  | 6,038,547       | 3-14-00  | Casto             |       |          | 1-7-98                        |
|                     | 64  | 6,044,273       | 3-28-00  | Tekinay           |       |          | 12-10-96                      |
| ↓                   | 65  | 6,058,102       | 5-2-00   | Drysdale et al.   |       |          | 11-6-98                       |
| AS                  | 66  | 6,058,262       | 5-2-00   | Kawas et al.      |       |          | 4-18-97                       |

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|  | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
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|----------------------|-----|-----------------|----------|-----------------|-------|----------|-------------------------------|
| AS                   | 67  | 6,059,842       | 5-9-00   | Dumarot et al.  |       |          | 4-14-98                       |
|                      | 68  | 6,061,722       | 5-9-00   | Lipa et al.     |       |          | 12-23-96                      |
|                      | 69  | 6,075,541       | 6-13-00  | Maclinovsky     |       |          | 11-7-97                       |
|                      | 70  | 6,088,522       | 7-11-00  | Lee et al.      |       |          | 7-31-97                       |
|                      | 71  | 6,104,699       | 8-15-00  | Holender et al. |       |          |                               |
|                      | 72  | 6,108,309       | 8-22-00  | Cohoe et al.    |       |          | 12-8-97                       |
|                      | 73  | 6,111,857       | 8-29-00  | Soliman et al.  |       |          | 9-11-97                       |
|                      | 74  | 6,122,083       | 9-19-00  | Ohta et al.     |       |          | 10-3-94                       |
|                      | 75  | 6,148,010       | 11-14-00 | Sutton et al.   |       |          | 6-24-98                       |
| ↓                    | 76  | 6,199,032       | 3-6-01   | Anderson        |       |          | 7-22-98                       |
| AS                   | 77  | 6,204,813       | 3-20-01  | Wadell et al.   |       |          | 2-20-98                       |

**FOREIGN PATENT DOCUMENTS**

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|---------------------|-----|-----------------|----------|--------------------|-------|----------|-------------------------------|
| AS                  | 78  | 6,208,833       | 3-27-01  | Preschutti et al.  |       |          | 6-24-97                       |
|                     | 79  | 6,229,540       | 5-8-01   | Tonelli et al.     |       |          | 10-13-98                      |
|                     | 80  | 6,253,086       | 6-26-01  | Parantainen et al. |       |          | 3-25-99                       |
|                     | 81  | 6,285,377       | 9-4-01   | Greenbaum et al.   |       |          | 6-26-97                       |
|                     | 82  | 6,289,203       | 9-11-01  | Smith et al.       |       |          | 2-25-98                       |
|                     | 83  | 6,317,599       | 11-13-01 | Rappaport et al.   |       |          | 5-26-99                       |
|                     | 84  | 6,326,987       | 12-4-01  | Alexander          |       |          | 12-19-00                      |
|                     | 85  | 6,330,005       | 12-11-01 | Tonelli et al.     |       |          | 10-6-99                       |
|                     | 86  | 6,311,144       | 10-30-01 | Abu El Ata         |       |          | 7-31-98                       |
| ↓                   | 87  | 6,337,688       | 1-8-02   | Berstis            |       |          | 1-29-99                       |
| AS                  | 88  | 6,338,031       | 1-8-02   | Lee et al.         |       |          | 9-23-99                       |

## FOREIGN PATENT DOCUMENTS

|  | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
|--|-----|-----------------|------|---------|-------|----------|-------------|----|
|  |     |                 |      |         |       |          | YES         | NO |
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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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EXAMINER

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# INFORMATION DISCLOSURE CITATION

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Docket Number (Optional)

02560032C<sub>1</sub>

Application Number

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Rappaport et al.

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## U.S. PATENT DOCUMENTS

| *EXAMINER<br>INITIAL | REF | DOCUMENT NUMBER | DATE     | NAME             | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|----------------------|-----|-----------------|----------|------------------|-------|----------|-------------------------------|
| AS                   | 89  | 6,356,758       | 3-12-02  | Almeida et al.   |       |          | 12-31-97                      |
|                      | 90  | 6,393,432       | 5-21-02  | Flansburg et al. |       |          | 6-2-99                        |
|                      | 91  | 6,408,312       | 6-18-02  | Forthman et al.  |       |          | 8-30-99                       |
|                      | 92  | 6,442,507       | 8-27-02  | Skidmore et al.  |       |          | 12-29-98                      |
|                      | 93  | 6,470,195       | 10-22-02 | Meyer            |       |          | 10-31-00                      |
|                      | 94  | 6,487,417       | 11-26-02 | Rossoni et al.   |       |          | 11-24-99                      |
|                      | 95  | 6,493,679       | 12-10-02 | Rappaport et al. |       |          | 5-26-99                       |
|                      | 96  | 6,496,290       | 12-17-02 | Lee              |       |          | 12-17-98                      |
|                      | 97  | 6,499,006       | 12-24-02 | Rappaport et al. |       |          | 7-14-99                       |
| ↓                    | 98  | 6,505,045       | 1-7-03   | Hills et al.     |       |          | 4-10-00                       |
| AS                   | 99  | 5,586,254       | 12-17-96 | Kondo            |       |          |                               |

## FOREIGN PATENT DOCUMENTS

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation |    |
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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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EXAMINER

/Akash Saxena/ (01/31/2007)

DATE CONSIDERED

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**INFORMATION DISCLOSURE CITATION**  
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|   |                                       |   |
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| Docket Number (Optional)<br><b>02560032CA</b> |                                       | Application Number<br><b>not assigned</b> |
| Applicant(s)<br><b>Rappaport et al.</b>       |                                       |   |
| Filing Date<br><b>concurrently</b>            | Group Art Unit<br><b>not assigned</b> |   |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE     | NAME           | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|-------------------|-----|-----------------|----------|----------------|-------|----------|----------------------------|
| AS                | 100 | 6,085,335       | 7-4-00   | Djoko et al.   |       |          | 12-31-97                   |
|                   | 101 | 5,710,758       | 1-20-98  | Soliman et al. |       |          | 9-29-95                    |
|                   | 102 | 5,821,937       | 10-13-98 | Tonelli et al. |       |          | 8-12-96                    |
|                   | 103 | 5,774,669       | 6-30-98  | George et al.  |       |          | 7-28-95                    |
|                   | 104 | 5,802,146       | 9-1-98   | Dulman         |       |          | 11-22-95                   |
|                   | 105 | 5,825,759       | 10-20-98 | Liu            |       |          | 7-24-95                    |
|                   | 106 | 5,845,124       | 12-1-98  | Berman         |       |          | 5-1-96                     |
|                   | 109 | 6,199,032       | 3-6-01   | Anderson       |       |          | 7-22-98                    |
|                   | 110 | 5,467,441       | 11-14-95 | Stone et al.   |       |          | 10-6-94                    |
|                   | 111 | 6,243,772       | 6-5-01   | Ghori et al.   |       |          | 1-31-97                    |
| AS                | 112 | 5,994,984       | 11-30-99 | Stancil et al. |       |          | 5-29-98                    |

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | FILING DATE |
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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

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| EXAMINER<br><b>/Akash Saxena/ (01/31/2007)</b> | DATE CONSIDERED |
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**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

Docket Number (Optional)

02560032CA

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Rappaport et al.

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**U.S. PATENT DOCUMENTS**

| EXAMINER<br>INITIAL | REF | DOCUMENT NUMBER | DATE    | NAME           | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|-----|-----------------|---------|----------------|-------|----------|-------------------------------|
| AS                  | 113 | 5,977,851       | 11-2-99 | Stancil et al. |       |          | 11-13-97                      |
| AS                  | 114 | 5,755,072       | 5-26-98 | Lingafelter    |       |          | 5-13-98                       |
|                     |     |                 |         |                |       |          |                               |
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**FOREIGN PATENT DOCUMENTS**

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

|  |  |
|--|--|
|  | From Bird's Eye Real-time Mapping Software dated 6-30-02<br>NOT COONSIDERED - NOT PRESENT IN FILE WRAPPER  |
|  | IEEE Transactions on Antennas and propagation, Vol. 46, No. 8, August 1998. "Effect of Terrain on Path Loss in Urban Enviroments for Wireless Applications" Leonard Piazzi and Henry L. Bertoni<br>NOT COONSIDERED - NOT PRESENT IN FILE WRAPPER |

EXAMINER /Akash Saxena/ (01/31/2007)

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| <b>INFORMATION DISCLOSURE CITATION</b><br><i>(Use several sheets if necessary)</i>   |  | Docket Number (Optional)         | Application Number |
|  |  | 02560032CA                       | not assigned       |
|  |  | Applicant(s)<br>Rappaport et al. |                    |
|  |  | Filing Date                      | Group Art Unit     |
|  |  | concurrently                     | n t assigned       |
| *EXAMINER<br>INITIAL   | OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>  |                                  |                    |
| 1  | P. Bahl, V. Padmanabhan, and A. Balachandran, "A Software System for Locating Mobile Users: Design, Evaluation, and Lessons," Microsoft Technical Report, April 2000<br>NOT COONSIDERED - NOT PRESENT IN FILE WRAPPER  |                                  |                    |
| 2  | G. Durkin, T.S. Rappaport, H. Xu, Measurements and Models for Radio Path Loss and Penetration Loss in and Around Homes and Trees at 5.85 GHz," IEEE Transactions on Communications, vol. 46, no. 11, November 1998.  |                                  |                    |
| 3  | C.M. Peter Ho et al., "Antenna Effects on Indoor Obstructed Wireless Channels and a Deterministic Image-Based Wide-Band Propagation Model for In-Building Personal Communications Systems," International Journal of Wireless Information Networks, Vol. 1, No. 1, 1994. |                                  |                    |
| 4  | S. Kim et al., "Radio Propagation Measurements and Predictions Using Three-dimensional Ray Tracing in Urban Environments at 908 MHz and 1.9 GHz," IEEE Transactions on Vehicular Technology, vol. 48, no. 3, May 1999  |                                  |                    |
| 5  | T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements and GPS Satellite Coverage for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, September 1995         |                                  |                    |
| 6  | R.K. Morrow, Jr. and T.S. Rappaport, "Getting In," Wireless Review Magazine, March 2000.   |                                  |                    |
| 7  | Wireless Valley Communications, Inc., "SitePlanner 3.16 for Windows 95/98/NT User's Manual," Software User's Manual, pp.5-148 to 5-156, 1999.  |                                  |                    |
| 8  | M. Panjwani et al., "Interactive Computation of Coverage Regions for Wireless Communication in Multifloored Indoor Environments," IEEE Journal on Selected Areas in Communications, Vol. 14, No. 3, April 1996.  |                                  |                    |
| 9  | L. Piazzzi and H.L. Bertoni, "Achievable Accuracy of Site-Specific Path-Loss Predictions in Residential Environments" IEEE Transactions on Vehicular Technology, vol. 48, no. 3, May 1999.   |                                  |                    |
| 10   | T.S. Rappaport et al., "Wireless Communications: Past Events and a Future Perspective", IEEE Communications Magazine, May 2002.  |                                  |                    |
| 11   | T.S. Rappaport et al., "Radio Propagation Prediction Techniques and Computer-Aided Channeling Modeling for Embedded Wireless Microsystems," ARPA Annual Report, MPRG Technical Report MPRG-TR-94-12, Virginia Tech, Jul 1994.  |                                  |                    |
| 12   | T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, November 1995                                     |                                  |                    |
| EXAMINER   |  | DATE CONSIDERED                  |                    |
| *EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |  |                                  |                    |

**INFORMATION DISCLOSURE CITATION**  
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Rappaport et al.

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concurrently

Group Art Unit

not assigned

**\*EXAMINER**  
**INITIAL**
**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

13

D. Ullmo et al., "Wireless Propagation in Buildings: A Statistical Scattering Approach," IEEE Transactions on Vehicular Technology, Vol. 48, No. 3, May 1999.

14

T.S. Rappaport, "wireless Communications: Principles and Practice" Second Edition, Prentice Hall, 2002.

15

T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements and GPS Satellite Coverage for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, September 1995.

16

T.S. Rappaport et al., "Indoor Path Loss Measurement for Homes and Apartments at 2.4 and 5.85 GHz," private report produced for Motorola, December 16, 1997.

17

T.S. Rappaport, "Isolating Interference," Wireless Review Magazine, May 2000.

18

Slides from T.S. Rappaport and R. Skidmore, "Introduction to In-Building Wireless Systems," Infocast In-Building Wireless Solutions Conference and Exposition, February 4, 2003.

19

S. Sandhu, M.P. Koushik, and T.S. Rappaport, "Predicted Path Loss for Reston VA, First set of predictions for ORD Project on Site Specific Propagation Prediction," MPRG Technical Report MPRG-TR-94-20, Virginia Tech, December 1994.

20

S. Sandhu, M.P. Koushik, and T.S. Rappaport, "Predicted Path Loss for Reston VA, First set of predictions for ORD Project on Site Specific Propagation Prediction," MPRG Technical Report MPRG-TR-94-20, Virginia Tech, March 1995.

21

S. Seidel et al., "Site-Specific Propagation Prediction for Wireless In-Building Personal Communication Design," IEEE Transactions on Vehicular Technology, Vol. 43, No. 4, November 1994.

22

S. Shakkottai and T.S. Rappaport, "Research Challenges in Wireless Networks: A Technical Overview," Proceeding of the Fifth International Symposium on Wireless Personal Multimedia Communications, Honolulu, HI, October 2002.

23

H. Sherali et al., "On the Optimal Location of Transmitters for Micro-cellular Radio Communication System Design," IEEE Journal on Selected Areas in Communications, Vol. Vol. 14, No. 3, pp. 662-673, May 1996.

24

R. Skidmore et al., "A Comprehensive In-Building and Microcellular Wireless Communication System Design Tool" The Bradley Department of Electrical Engineering, MPRG-TR-97-13, June 1997.  
Master's Thesis - unpublished by Virginia Tech for 2 years after submission.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.





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Rappaport et al.

Filing Date

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Group Art Unit

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INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Company Web Page "Actix" www.actix.com product name: E-NOS (now E-AMS)

Company Web Page "Agilent" www.agilent.com product name: OPAS32

Company Web Page "Agilent" www.agilent.com product name: Wizard

Company Web Page "Edmarco" www.edx.com product name: SignalPro

Company Web Page "ComOpt" www.comopt.com product name: CallOpt AFP

Company Web Page "Lucent" www.bell-labs.com product name: WiSE

Company Web Page "Ericsson" www.ericsson.com product name: TEMS Lite

Company Web Page "Ericsson" www.ericsson.com product name: TEMS

Company Web Page "Marconi" www.marconi.com product name: PlanET

Company Web Page "Marconi" www.marconi.com product name: decibelPlanner

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